

Grade: 4th – Adult
Time: 1hr.
Season: All

SURVIVAL FIRST AID

National Science Teaching Standards

- A.** Science as **INQUIRY**
- B.** **PHYSICAL** Science
- D.** **EARTH** Science
- F.** Science in **PERSONAL** and **SOCIAL PERSPECTIVE**

Background Information:

This lesson is meant as a basic overview of simple first aid that could be useful for hikers, campers, or other outdoors enthusiasts. It is not intended as a complete course, and it is highly recommended that participants enroll in a full first aid course such as those provided by the Red Cross. Certain important elements of first aid, such as CPR, will not be covered in this lesson, as this should be performed by persons who have been fully trained in the proper procedures.

Objective

The purpose of this activity is to instruct students in basic first aid practices that would be helpful in treating injuries that may occur while hiking or participation in other forms of outdoor recreation.

Pre Activity:

- Invite your school nurse, the Red Cross, or someone from your local hospital to come to your classroom to discuss basic 1st aid. Also, check with the Red Cross they may have handouts for your class.

Materials

First Aid Backpack, containing:

emergency blanket	first aid guide
latex gloves	instant cold packs
elastic bandage	antibacterial wipes or spray
Band-Aids of various sizes	antibacterial cream
medical tape	calamine lotion
triangular bandage	Tylenol or other pain reliever
safety pins	antacid tablets
sun block	CPR face shield for use by trained individuals
gauze pads	gauze rolls
tweezers	scissors
flashlight	whistle
matches or flint	compass and map

Procedure

1. This exercise may be done in a classroom setting or outdoors along a trail. A series of conditions will be described by the leader, and volunteers will be used to demonstrate the victim and rescuer in each situation.
2. Discuss with the class the importance of being prepared in case of an accident or injury in the outdoors. If the class has not done the Survival Activity where they would have learned the steps to take prior to going on an outdoor adventure, go over those now:
 - Tell someone where you are going, who you are going with, and when you plan to return.
(Write the information down!)
 - Go where you said you were going, or let someone know if you decided to go somewhere else.
 - Never go on an outdoor excursion alone.
 - Take along a compass and map, and know how to use them.
 - Wear proper clothing and take appropriate gear. Remember that the weather can change suddenly.
 - If going somewhere unfamiliar, plan for your trip to end before dark, if possible.
 - Bring a First Aid kit with you, and be familiar with the equipment and how to use it.
3. Display the contents of the First Aid Backpack, introducing each item to the students. Having an understanding of the equipment and procedures is essential to being able to confidently deal with an emergency situation.
4. As you describe a series of conditions, select volunteers from the group to assist you in demonstrating first aid techniques and equipment use. Students will enjoy playing the role of the victim and rescuer as you go through a variety of injuries that could occur and how they should be treated. Explain that in each situation, if there is another person with you who could safely go for help while you attend to the victim, they should do so immediately.

I. Bleeding

Have the first victim feign a bleeding injury. Demonstrate assessing the person's injuries and following the proper steps to stop bleeding. Stress to the students that the victim should not be moved unless he is in immediate danger in the place where he is. Have a second student pretend to go for help, and a third begin assessment and treatment as you describe the details.

Treatment

1. Put on latex gloves to protect yourself and the victim.
2. Cover the wound with a clean gauze or cloth and apply direct pressure with the palm of your hand. Elevate the injured area if you don't suspect a fracture. When bleeding stops or slows greatly, bandage with gauze and tape. If direct pressure is not effective:
3. Slow the flow of blood to an affected limb by applying pressure to a point where an artery can be pressed against a bone to stop the flow of blood beyond that point. Pressure points are located inside the arm halfway between the shoulder and elbow, and at the top of the leg near the groin.
4. A tourniquet is used only as a last resort, often resulting in loss of limb, and will not be covered here.

II. Shock

Shock is a dangerous condition that can often accompany an accident or injury. Shock may be caused by a sudden injury, loss of blood, or hypothermia. Symptoms of shock include weakness, cold,

pale, clammy skin, rapid, weak pulse, shallow, irregular breathing, chills, nausea, and loss of consciousness. Choose a volunteer to play the part of a shock victim, and another to assess and treat the victim.

Treatment

1. Keep the victim lying on her back and cover her with an emergency blanket, or extra clothing to keep her warm. Leaves may be used if a blanket is not available.
2. Treat any known causes of shock, such as bleeding, severe pain, etc.
3. If no head or neck injuries are suspected, elevate the victim's legs 8-12 inches.
4. Do not give anything by mouth
5. Get professional medical help as soon as possible.

III. Hypothermia

Hypothermia is often called the "killer of the unprepared." It is the number one killer of outdoor enthusiasts. Hypothermia is defined as a loss of body heat to the point that the body cannot bring the temperature back to normal. Exposure to cold, wind or water as well as exhaustion are possible causes. Symptoms include shivering, apathy, clumsiness, slurred speech, stumbling, incoherence, collapse, and loss of consciousness. Have students volunteer to demonstrate the hypothermia victim and rescuer.

Treatment

1. Warm victim by exchanging wet clothing for dry, covering with blankets, and placing in shelter. (May need to dry clothes one layer at a time near fire. May use leaves if no blanket or other shelter is available.)
2. Hot water bottles and rescuer's body heat may be used to increase the victim's body temperature.
3. Give warm, sugared liquids to drink if victim is conscious and can swallow.

Prevention

To protect yourself from hypothermia, avoid the conditions that cause it. Stay dry. Wet clothing loses about 90 percent of insulating value. Put on rain gear **before** the downpour. Put on your wool jacket **before** you start shivering. Wool as well as some newer synthetic fibers, unlike cotton, helps maintain body heat even when it is wet.

Beware of the wind. Cold is increased greatly by wind. It may be 40 degrees outside with the sun shining, but a 10 mile per hour wind will make the temperature feel like 28 degrees. Most cases of hypothermia develop in air temperatures between 30 and 50 degrees. The combination of wind and temperature is called the wind chill factor.

IV. Sprains and Strains

A sprain is a torn ligament at a joint. A strain is a torn or over stretched muscle. Symptoms include pain with movement, swelling, tenderness, and possible discoloration. Select volunteers to demonstrate treatment of a sprained ankle.

Treatment

1. If a sprained ankle is suspected, loosen or remove shoe.
2. Apply cold pack to area, protecting skin with a thin towel or cloth.
3. Elevate affected limb.
4. If a leg fracture is even suspected, the victim should not be allowed to walk. Otherwise, an elastic bandage may be used to support the joint, and the victim should be helped to safety, putting little to no pressure on the joint.

V. Fractures

A fracture is a crack or break in a bone. A compound fracture is one where the broken bone pierces the skin. Have volunteers demonstrate the correct procedure for treating simple and/or compound fractures.

Treatment

1. Keep victim warm and still.

2. If a broken neck or back is suspected, do not move the person if possible.
3. Treat the victim for shock if necessary.
4. Do not move the victim until you have immobilized the affected limb.
5. If it is a compound fracture, control bleeding by using pressure points. Apply a sterile pad to wound and wrap in gauze.
6. If it is a closed or simple fracture, apply a cold pack to reduce swelling, protecting skin with a thin towel or cloth.
7. If the victim must be moved, apply a splint, immobilizing the joint above and the joint below the fracture.
8. Do not move the joint, but splint in the position found in.
9. Create a splint using clothing, magazines, sticks, or other things available to you, padding with cotton or clothing. Tie splint with gauze or strips of clothing.
10. To splint a broken leg, place a blanket or other thick padding between legs and bind the injured leg to the uninjured leg with strips of gauze or cloth.

VI. Burns

Burns are measured in terms of First, Second, and Third degree burns. A First degree burn involves outer layers of skin and appears as redness with mild swelling and pain. A Second degree burn is a deep burn with blisters, considerable pain and swelling. The surface of the skin appears wet with this type of burn. A Third degree burn involves deep tissue destruction with a white or charred appearance and no pain. Ask volunteers to demonstrate treatment of a burn.

Treatment

1. Apply cool wet cloths or immerse in cool water.
2. Treat victim for shock if necessary.
3. Do not use ointments, lotions or creams.
4. Do not remove any clothing that sticks to burned area.
5. Do not use cotton or material with loose fibers to cover burns.
6. Blot gently; apply a dry, nonstick sterile pad to area.
7. Wrap loosely with dry gauze.

Emergencies can happen anywhere. Wherever you are, you might help save a life if you know these first aid basics:

- Know where the first aid kit is.
- Know what it contains and what is required for the situation.
- Know how to use the materials for effective first aid.

This course covers only the general first aid steps. As soon as you can, sign up for a regular American Red Cross First Aid Training class.

Post Activity:

- Read a class novel, *Hatchet*, Gary Poulson. Many of his books are about survival situations.
- Have students write scenarios of situations needing 1st aid. Take turns role playing them.
- Have students make a list of supplies needed in a 1st aid kit. Have them take the list home and with parents put a 1st aid kit together for vehicles or home.

Post Discussion:

- Listed under the “Procedure” are recommendations of what to do before going on an adventure. Discuss each one and why it is important.

References

Today’s Hunter, 2002, Kalkomey Enterprises, Inc, USA pp 74-76.

Johnson & Johnson First Aid Guide, 1990, Skillman, NS